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WHAT IS CLAIMED IS:

1. For use in an RF receiver unit comprising an RF receive path that is capable of being coupled to an antenna that is capable of receiving an RF signal, an injection circuit for measuring RF signals in said RF receive path comprising:

a circulator coupled to said antenna and coupled to said RF receive path; and

an injection source coupled to said circulator, wherein said injection source is capable of injecting a test RF signal into said circulator.

2. The injection circuit as set forth in Claim 1 further comprising a switch for selectively enabling and disabling the transfer of said test RF signal from said injection source to said circulator.

3. The injection circuit as set forth in Claim 1 wherein said circulator has a reverse isolation of at least 20 dB.

4. The injection circuit as set forth in Claim 1 wherein said RF receive path comprises an amplifier and level detector circuitry coupled to said amplifier, said level detector circuitry capable of measuring the received signal strength indicator of an RF signal in said RF receive path.

5. The injection circuit as set forth in Claim 1 wherein said RF receive path comprises an amplifier and level detector circuitry coupled to said amplifier and automatic gain control circuitry coupled to said level detector circuitry, said automatic gain control circuitry capable of controlling the gain of an RF signal in said RF receive path.

6. The injection circuit as set forth in Claim 1 further comprising a duplexer coupled between said antenna and said circulator.

7. The injection circuit as set forth in Claim 1 further comprising a directional coupler coupled to said circulator and to said RF receive path.

8. The injection circuit as set forth in Claim 7 wherein said injection source is coupled to said directional coupler, and wherein said injection source is capable of injecting a test RF signal into said directional coupler.

9. The injection circuit as set forth in Claim 8 further comprising a switch coupled to said circulator and coupled to said directional coupler for selectively enabling and disabling the transfer of test RF signals from said injection source to said circulator and from said injection source to said directional coupler.

10. The injection circuit as set forth in Claim 9 further comprising an impedance measurement controller coupled to said switch, said impedance measurement controller capable of causing said switch to selectively enable and disable the transfer of test RF signals from said injection source to said circulator and from said injection source to said directional coupler.

11. The injection circuit as set forth in Claim 9 wherein said circulator has a reverse isolation of at least 20 dB.

12. The injection circuit as set forth in Claim 9 wherein said RF receive path comprises an amplifier and level detector circuitry coupled to said amplifier, said level detector circuitry capable of measuring the received signal strength indicator of an RF signal in said RF receive path.

13. The injection circuit as set forth in Claim 9 wherein said RF receive path comprises an amplifier and level detector circuitry coupled to said amplifier and automatic gain control circuitry coupled to said level detector circuitry, said automatic gain control circuitry capable of controlling the gain of an RF signal in said RF receive path.

14. The injection circuit as set forth in Claim 9 further comprising a duplexer coupled between said antenna and said circulator.

15. A method for calibrating the RF receiver gain of an RF receive antenna that is coupled to an RF receive path comprising the steps of:

generating a test RF signal in an RF signal injection source;

transferring said test RF signal from said RF signal injection source to a circulator that is coupled to said antenna and that is coupled to said RF receive path;

transferring said test RF signal from said circulator to said antenna;

measuring the received signal strength indicator of a portion of said test RF signal that is reflected from said antenna into said RF receive path;

obtaining an offset to an existing received signal strength indicator curve using said measurement of received signal strength indicator, wherein said offset represents variations in said RF receiver gain that are caused by component performance variations due to temperature and frequency; and

using said offset to calibrate said RF receiver gain.

16. The method as set forth in Claim 15 further comprising the steps of:

transferring said test RF signal from said circulator to a duplexer coupled to said antenna and coupled to said circulator; and

measuring the received signal strength indicator of a portion of said test RF signal that is reflected from said antenna and from said duplexer into said RF receive path.

17. A method for measuring the antenna loss of an RF receive antenna that is coupled to an RF receive path comprising the steps of:

generating a first test RF signal in an RF signal injection source;

transferring said first test RF signal from said RF signal injection source to a directional coupler, wherein one end of said directional coupler is coupled to a circulator that is coupled to said antenna and the other end of said directional coupler is coupled to said RF receive path;

transferring said first test RF signal from said directional coupler to level detector circuitry within said RF receive path;

measuring within said level detector circuitry the received signal strength indicator of said first test RF signal from said directional coupler to obtain a first received signal strength indicator measurement;

generating a second test RF signal in said RF signal injection source that is identical to said first test RF signal;

transferring said second test RF signal from said RF signal injection source to said circulator that is coupled to said antenna and that is coupled to said directional coupler;

transferring said second test RF signal from said circulator to said antenna;

measuring within said level detector circuitry the received signal strength indicator of a portion of said second test RF signal that is reflected from said antenna through said circulator and through said directional coupler and to said level detector circuitry to obtain a second received signal strength indicator measurement; and

comparing said first received signal strength indicator measurement with said second received signal strength indicator measurement to determine the voltage standing wave ratio for said antenna.

18. The method as set forth in Claim 17 further comprising the steps of:

transferring said second test RF signal from said circulator to a duplexer coupled to said antenna and coupled to said circulator; and

measuring within said level detector circuitry the received signal strength indicator of a portion of said second test RF signal that is reflected from said antenna through said duplexer and through said circulator and through said directional coupler and to said level detector circuitry to obtain a second received signal strength indicator measurement.

19. The method as set forth in Claim 17 further comprising the step of:

combining with said first test RF signal from said directional coupler an RF receive signal from said antenna.

20. The method as set forth in Claim 19 further comprising the step of:

combining with said second test RF signal from said circulator an RF receive signal from said antenna.